

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1-42.(Canceled)

43.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,
~~wherein an electric field is applied substantially in parallel with a surface of the first~~
~~substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes
of liquid crystal molecules kept parallel with a surface of the first substrate, and
wherein a transparent conductive material is formed over the second substrate.

44.(Original) A liquid crystal display device according to claim 43 wherein the first and the second substrates comprise a glass or a quartz substrate.

45.(Original) A liquid crystal display device according to claim 43 wherein the thin film transistor comprises an amorphous silicon.

46.(Original) A liquid crystal display device according to claim 43 wherein the transparent conductive material functions as an electrode.

47.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,

~~wherein an electric field is applied substantially in parallel with a surface of the first substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the first substrate, and

wherein a transparent conductive material is formed over an entire surface of the second substrate.

48.(Original) A liquid crystal display device according to claim 47 wherein the first and the second substrates comprise a glass or a quartz substrate.

49.(Original) A liquid crystal display device according to claim 47 wherein the thin film transistor comprises an amorphous silicon.

50.(Original) A liquid crystal display device according to claim 47 wherein the transparent conductive material functions as an electrode.

51.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,
~~wherein an electric field is applied substantially in parallel with a surface of the first substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the first substrate, and
wherein a transparent conductive material comprising ITO is formed over the second substrate.

52.(Original) A liquid crystal display device according to claim 51 wherein the first and the second substrates comprise a glass or a quartz substrate.

53.(Original) A liquid crystal display device according to claim 51 wherein the thin film transistor comprises an amorphous silicon.

54.(Original) A liquid crystal display device according to claim 51 wherein the transparent conductive material functions as an electrode.

55.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,
~~wherein an electric field is applied substantially in parallel with a surface of the first~~
~~substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes
of liquid crystal molecules kept parallel with a surface of the first substrate, and
wherein a transparent conductive material comprising ITO is formed over an entire
surface of the second substrate.

56.(Original) A liquid crystal display device according to claim 55 wherein the first and the second substrates comprise a glass or a quartz substrate.

57.(Original) A liquid crystal display device according to claim 55 wherein the thin film transistor comprises an amorphous silicon.

58.(Original) A liquid crystal display device according to claim 55 wherein the transparent conductive material functions as an electrode.

59.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and

a liquid crystal layer interposed between the first substrate and the second substrate,
~~wherein an electric field is applied substantially in parallel with a surface of the first~~
~~substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes
of liquid crystal molecules kept parallel with a surface of the first substrate,
wherein a transparent conductive material is formed over the second substrate, and
wherein a black matrix comprising a resin material is formed adjacent to the second
substrate.

60.(Previously Presented) A liquid crystal display device according to claim 59 wherein
the first and the second substrates comprise a glass or a quartz substrate.

61.(Previously Presented) A liquid crystal display device according to claim 59 wherein
the thin film transistor comprises an amorphous silicon.

62.(Previously Presented) A liquid crystal display device according to claim 59 wherein
the transparent conductive material functions as an electrode.

63.(Previously Presented) A liquid crystal display device according to claim 59 wherein
the black matrix contains a black pigment.

64.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,
~~wherein an electric field is applied substantially in parallel with a surface of the first~~
~~substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes
of liquid crystal molecules kept parallel with a surface of the first substrate,

wherein a transparent conductive material is formed over an entire surface of the second substrate, and

wherein a black matrix comprising a resin material is formed adjacent to the second substrate.

65.(Previously Presented) A liquid crystal display device according to claim 64 wherein the first and the second substrates comprise a glass or a quartz substrate.

66.(Previously Presented) A liquid crystal display device according to claim 64 wherein the thin film transistor comprises an amorphous silicon.

67.(Previously Presented) A liquid crystal display device according to claim 64 wherein the transparent conductive material functions as an electrode.

68.(Previously Presented) A liquid crystal display device according to claim 64 wherein the black matrix contains a black pigment.

69.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,
wherein ~~an electric field is applied substantially in parallel with a surface of the first substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the first substrate,

wherein a transparent conductive material comprising ITO is formed over the second substrate, and

wherein a black matrix comprising a resin material is formed adjacent to the second substrate.

70.(Previously Presented) A liquid crystal display device according to claim 69 wherein the first and the second substrates comprise a glass or a quartz substrate.

71.(Previously Presented) A liquid crystal display device according to claim 69 wherein the thin film transistor comprises an amorphous silicon.

72.(Previously Presented) A liquid crystal display device according to claim 69 wherein the transparent conductive material functions as an electrode.

73.(Previously Presented) A liquid crystal display device according to claim 69 wherein the black matrix contains a black pigment.

74.(Currently Amended) A liquid crystal display device comprising:
a first substrate and a second substrate opposed to the first substrate;
a thin film transistor formed over the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,
wherein ~~an electric field is applied substantially in parallel with a surface of the first substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the first substrate,

wherein a transparent conductive material comprising ITO is formed over an entire surface of the second substrate, and

wherein a black matrix comprising a resin material is formed adjacent to the second substrate.

75.(Previously Presented) A liquid crystal display device according to claim 74 wherein the first and the second substrates comprise a glass or a quartz substrate.

76.(Previously Presented) A liquid crystal display device according to claim 74 wherein the thin film transistor comprises an amorphous silicon.

77.(Previously Presented) A liquid crystal display device according to claim 74 wherein the transparent conductive material functions as an electrode.

78.(Previously Presented) A liquid crystal display device according to claim 74 wherein the black matrix contains a black pigment.

79.(Currently Amended) A liquid crystal display device comprising:
a thin film transistor over a substrate, wherein the thin film transistor includes at least a gate electrode, a semiconductor film adjacent to the gate electrode, and an electrode electrically connected to the semiconductor film;
a common electrode over the substrate;
a liquid crystal layer over the thin film transistor and the common electrode; and
a transparent conductive material over the liquid crystal layer, wherein the liquid crystal layer is located between the substrate and the transparent conductive material, and
wherein ~~an electric field is applied substantially in parallel with a surface of the substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the substrate.

80.(Previously Presented) A liquid crystal display device according to claim 79 wherein the substrate comprises a glass or a quartz substrate.

81.(Previously Presented) A liquid crystal display device according to claim 79 wherein the transparent conductive material functions as an electrode.

82.(Previously Presented) A liquid crystal display device according to claim 79 wherein the gate electrode and the common electrode are formed on a same surface.

83.(Currently Amended) A liquid crystal display device comprising:

a thin film transistor over a substrate, wherein the thin film transistor includes at least a gate electrode, a semiconductor film adjacent to the gate electrode, and an electrode electrically connected to the semiconductor film;

a common electrode over the substrate;

a liquid crystal layer over the thin film transistor and the common electrode; and

a transparent conductive material comprising ITO over the liquid crystal layer, wherein the liquid crystal layer is located between the substrate and the transparent conductive material, and

~~wherein an electric field is applied substantially in parallel with a surface of the substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the substrate.

84.(Previously Presented) A liquid crystal display device according to claim 83 wherein the substrate comprises a glass or a quartz substrate.

85.(Previously Presented) A liquid crystal display device according to claim 83 wherein the transparent conductive material functions as an electrode.

86.(Previously Presented) A liquid crystal display device according to claim 83 wherein the gate electrode and the common electrode are formed on a same surface.

87.(Currently Amended) A liquid crystal display device comprising:

a thin film transistor over a substrate, wherein the thin film transistor includes at least a gate electrode, a semiconductor film over the gate electrode, and an electrode electrically connected to the semiconductor film;

a common electrode over the substrate;

a liquid crystal layer over the thin film transistor and the common electrode; and

a transparent conductive material over the liquid crystal layer, wherein the liquid crystal layer is located between the substrate and the transparent conductive material, and

~~wherein an electric field is applied substantially in parallel with a surface of the substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the substrate.

88.(Previously Presented) A liquid crystal display device according to claim 87 wherein the substrate comprises a glass or a quartz substrate.

89.(Previously Presented) A liquid crystal display device according to claim 87 wherein the transparent conductive material functions as an electrode.

90.(Previously Presented) A liquid crystal display device according to claim 87 wherein the gate electrode and the common electrode are formed on a same surface.

91.(Currently Amended) A liquid crystal display device comprising:

a thin film transistor over a substrate, wherein the thin film transistor includes at least a gate electrode, a semiconductor film over the gate electrode, and an electrode electrically connected to the semiconductor film;

a common electrode over the substrate;

a liquid crystal layer over the thin film transistor and the common electrode; and

a transparent conductive material comprising ITO over the liquid crystal layer, wherein the liquid crystal layer is located between the substrate and the transparent conductive material, and

~~wherein an electric field is applied substantially in parallel with a surface of the substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the substrate.

92.(Previously Presented) A liquid crystal display device according to claim 91 wherein the substrate comprises a glass or a quartz substrate.

93.(Previously Presented) A liquid crystal display device according to claim 91 wherein the transparent conductive material functions as an electrode.

94.(Previously Presented) A liquid crystal display device according to claim 91 wherein the gate electrode and the common electrode are formed on a same surface.

95.(Currently Amended) A liquid crystal display device comprising:

a thin film transistor over a substrate, wherein the thin film transistor includes at least a gate electrode, an amorphous semiconductor film adjacent to the gate electrode, and an electrode electrically connected to the amorphous semiconductor film;

a common electrode over the substrate;

a liquid crystal layer over the thin film transistor and the common electrode; and

a transparent conductive material over the liquid crystal layer, wherein the liquid crystal layer is located between the substrate and the transparent conductive material, and

~~wherein an electric field is applied substantially in parallel with a surface of the substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the substrate.

96.(Previously Presented) A liquid crystal display device according to claim 95 wherein the substrate comprises a glass or a quartz substrate.

97.(Previously Presented) A liquid crystal display device according to claim 95 wherein the transparent conductive material functions as an electrode.

98.(Previously Presented) A liquid crystal display device according to claim 95 wherein the gate electrode and the common electrode are formed on a same surface.

99.(Currently Amended) A liquid crystal display device comprising:
a thin film transistor over a substrate, wherein the thin film transistor includes at least a gate electrode, an amorphous semiconductor film adjacent to the gate electrode, and an electrode electrically connected to the amorphous semiconductor film;
a common electrode over the substrate;
a liquid crystal layer over the thin film transistor and the common electrode; and
a transparent conductive material comprising ITO over the liquid crystal layer, wherein the liquid crystal layer is located between the substrate and the transparent conductive material, and

~~wherein an electric field is applied substantially in parallel with a surface of the substrate in at least a middle of the liquid crystal layer~~ a switching is carried out with long axes of liquid crystal molecules kept parallel with a surface of the substrate.

100.(Previously Presented) A liquid crystal display device according to claim 99 wherein the substrate comprises a glass or a quartz substrate.

101.(Previously Presented) A liquid crystal display device according to claim 99 wherein the transparent conductive material functions as an electrode.

102.(Previously Presented) A liquid crystal display device according to claim 99 wherein the gate electrode and the common electrode are formed on a same surface.